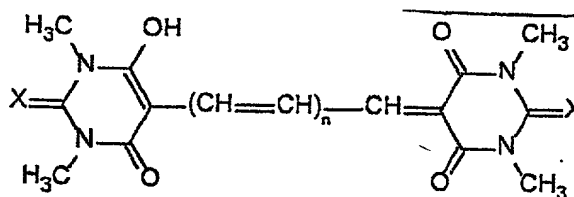


What is Claimed is:

1. In a method for measuring transmembrane potential changes in a biological cell, the improvement comprising using compound of Structure I as a potentiometric probe.



X: is O, or S. n is 1 or 2.

I

Wherein X is O, or S; n is 1 or 2.

2. The method of claim 1 comprising:
 - (a) contacting a compound of structure I with cell membrane;
 - (b) stimulating membrane potential changes physically or with a biologically active substance; and
 - (c) measuring the fluorescence or luminescence changes.
3. The method of claim 1, wherein the potentiometric probe is used to measure transmembrane potential changes in combination with a second colored reagent.
4. The method of claim 1, wherein the membrane is a plasma membrane of a biological cell.
5. The method of claim 1, wherein the measurement is made in a fluorescence microplate reader.
6. The method of claim 5, wherein the fluorescence microplate reader is a fluorometric plate reader having an integrated pipeting and fluidic system.
7. The method of claim 1, wherein the measurement is made with a fluorescence flow cytometer.
8. The method of claim 1, wherein the measurement is made in a fluorescence microscope.
9. A method of claim 1 wherein a compound of Structure I is used in combination with a second fluorescent indicator.

10. The method of claim 9, wherein the second fluorescent indicator is Indo-1, Fura-2 and Fluo-3, Calcium Green or Fluo-4.

5 11. A test kit for measuring membrane potential changes comprising a compound of structure I as a reagent.

12. A test kit according to claim 11 for measuring membrane potential changes comprising a compound of structure I and a second fluorescent reagent.

10 13. A test kit according to claim 11 further containing Indo-1, Fura-2, Fluo-3, Calcium Green or Fluo-4.

14. A test kit according to claim 11 for measuring membrane potential changes comprising a compound of structure 1 and a second non-fluorescent colored reagent.

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